

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q92234

Christian HEMBD

Appln. No.: 10/562,577

Group Art Unit: 2872

Confirmation No.: 7865

Examiner: Arnel C LAVARIAS

Filed: November 9, 2006

For: CORRECTING DEVICE TO COMPENSATE FOR POLARIZATION DISTRIBUTION
PERTURBATIONS

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

ATTN: Office of Initial Patent Examination

Filing Receipt Correction

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

We enclose a copy of the Official Filing Receipt for the above-identified application and request the following corrections:

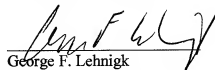
Under Domestic Priority data as claimed by Applicant:

Delete: PCT/EP04/06504 06/14/2005

Insert: PCT/EP2004/06504 06/17/2004

Verification for the requested correction is indicated on the PCT Cover Page of WO 2005/001527 A1 as well as on the Declaration filed November 9, 2006.

Respectfully submitted,



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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: April 27, 2010



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371(c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLMS	IND CLMS
10/562,577	11/09/2006	3643	1030	Q92234	13	1

23373
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

DOCKETED
APR 27 2007

CONFIRMATION NO. 7865

FILING RECEIPT

OC000000023534751

Date Mailed: 04/26/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Christian Hembd, Goeppingen-Faurndau, GERMANY; ✓

Assignment For Published Patent Application

CARL ZEISS SMT AG ✓

Power of Attorney: The patent practitioners associated with Customer Number 23373.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/EP04/06504 06/17/2005

Foreign Applications

GERMANY 103 28 938.0 06/27/2003

If Required, Foreign Filing License Granted: 04/25/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/562,577**

Projected Publication Date: 08/02/2007

Non-Publication Request: No

Early Publication Request: No

Title

Correcting device to compensate for polarization distribution perturbations and projection objective for microlithography ✓

Preliminary Class

452

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process simplifies the filing of patent applications on the same invention in member countries, but **does not** result in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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(19) Weltorganisation für geistiges Eigentum
Internationales Büro



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6. Januar 2005 (06.01.2005)

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(51) Internationale Patentklassifikation⁷: G02B 5/30,
27/00, 13/14

[DE/DE]; Buchenstr. 20, 73035 Göppingen-Faurndau
(DE).

(21) Internationales Aktenzeichen: PCT/EP2004/001527

(74) Anwalt: SCHWANHÄUSSER, Gernot; Osterlag & Partner,
Eibenweg 10, 70597 Stuttgart (DE).

(22) Internationales Anmeldedatum: 17. Juni 2004 (17.06.2004)

(81) Bestimmungsstaaten (soweit nicht anders angegeben, für
jede verfügbare nationale Schutzrechtsart): AE, AG, AL,
AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:
103 28 938.0 27. Juni 2003 (27.06.2003) DE

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(72) Erfinder; und

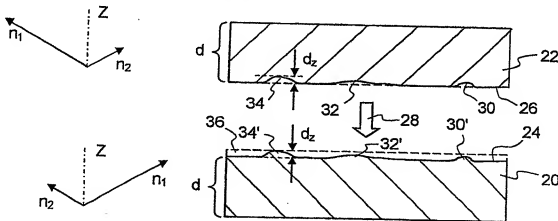
(75) Erfinder/Anmelder (nur für US): HEMBD, Christian

(84) Bestimmungsstaaten (soweit nicht anders angegeben, für
jede verfügbare regionale Schutzrechtsart): ARIPO (BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,

[Fortsetzung auf der nächsten Seite]

(54) Title: CORRECTIVE DEVICE FOR COMPENSATING DISTURBANCES OF POLARIZATION DISTRIBUTION, AND
MICROLITHOGRAPHIC PROJECTION LENS

(54) Bezeichnung: KORREKTUREINRICHTUNG ZUR KOMPENSATION VON STÖRUNGEN DER POLARISATIONSVER-
TEILUNG SOWIE PROJEKTIONSOBJEKTIV FÜR DIE MIKROLITHOGRAPHIE



(57) Abstract: Disclosed is a corrective device for compensating disturbances of polarization distribution across the cross-section of a light beam (10). Said corrective device comprises a corrective member (18; 118) encompassing two double-refractive corrective elements (20, 22; 120a, 120b, 122; 220; 320, 322) with two substantially parallel surfaces (24, 26; 126, 127). The thickness (d) of the corrective element (22, 122, 222) is essentially constant between said surfaces (26; 126, 127). At least one of the surfaces (24, 26; 126, 127) of at least one of the corrective elements (20, 22; 120a, 120b, 122; 220; 320, 322) is refinished in such a way that local irregularities in thickness Δd are created by means of which the disturbances of polarization distribution are at least nearly compensated. The arrangement, thickness (d), and double-refractive properties of the corrective elements (20, 22; 120a, 120b, 122; 220; 320, 322) are selected such that the double-refractive effects thereof mutually cancel each other if the local irregularities in thickness Δd are not taken into consideration. The inventive corrective device influences polarization only at points where disturbances are to be compensated.

[Fortsetzung auf der nächsten Seite]

**DECLARATION AND POWER OF ATTORNEY FOR PATENT
APPLICATION (37 C.F.R. 1.63)****Erklärung und Vollmacht für Patentanmeldung
(37 C.F.R. 1.63)****German Language Declaration**

Ich erkläre hiermit:

dass der Wohnsitz, die Postanschrift und die Staatsangehörigkeit jedes Erfinders den im Nachstehenden nach deren Namen aufgeführten Angaben entsprechen, dass, nach bestem Wissen, die nachstehend genannten Erfinder die ursprünglichen und ersten Erfinder des Gegenstandes sind, der beansprucht wird und für den ein Patent für die Erfindung mit folgendem Titel beantragt wird:

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**CORRECTING DEVICE TO COMPENSATE FOR
POLARIZATION DISTRIBUTION
PERTURBATIONS AND PROJECTION
OBJECTIVE FOR MICROLITHOGRAPHY**

☐ wobei der Anmeldetext hier beigelegt ist,

ODER

☐ wobei das Patent am _____ unter der US-Anmeldenummer oder unter der Internationalen Anmeldenummer im Rahmen des Vertrags über die Zusammenarbeit auf dem Gebiet des Patentwesens (PCT) _____ (Bestätigungsnr. _____) angemeldet wurde und am _____ abgeändert wurde (falls zutreffend).

Ich bestätige hiermit, dass ich den Inhalt des oben angegebenen Anmeldetextes, einschließlich der Ansprüche, die gegebenenfalls, wie oben erwähnt, abgeändert wurden, überprüft und verstanden habe.

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☒ the specification of which is attached hereto

OR

☐ was filed on _____ as United States Application Number or PCT International Application Number _____ (Confirmation No. _____), and was amended on _____

(if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part application(s), material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

German Language Declaration

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Prior Foreign Application Number(s)
Anmeldenummern früherer Auslandsanmeldungen

103 28 938.0	DE
(Application Number)	(Country)
(Anmeldenummer)	(Land)
(Application Number)	(Country)
(Anmeldenummer)	(Land)

Ich beanspruche hiermit nationale Priorität unter 35 U.S.C. 119(e) aller unten aufgeführten US-Provisional-Anmeldungen.

(Application Number)	(Filing Date)
(Anmeldenummer)	(Anmeldetag)
(Application Number)	(Filing Date)
(Anmeldenummer)	(Anmeldetag)

Ich beanspruche hiermit die mir unter 35 U.S.C. 120 zustehenden Vorteile aller unten aufgeführten US-Patentanmeldungen bzw. gemäß § 365(c) aller PCT internationalen Anmeldungen, welche die Vereinigten Staaten von Amerika benennen, und erkenne, insofern der Gegenstand jedes früheren Anspruchs der vorliegenden Patentanmeldung nicht in einer US-Patentanmeldung bzw. PCT internationalen Anmeldung in einer gemäß 35 U.S.C. 112, erster Absatz, vorgeschriebenen Art und Weise offenbart wurde, meine Pflicht zur Offenbarung jeglicher Informationen an, die für die Patentfähigkeit der vorliegenden Patentanmeldung in Einklang mit 37 C.F.R. 1.56 von Belang sind und die im Zeitraum zwischen dem Anmeldetag der früheren Patentanmeldung und dem nationalen oder dem (PCT) internationalen Anmeldetag bekannt geworden sind.

Prior U.S. or International Application Number(s)
Vorherige US- oder internationale Anmeldenummer(n)

PCT/EP2004/006504	17 June 2004
(Application Number)	(Filing Date)
(Anmeldenummer)	(Anmeldetag)
(Application Number)	(Filing Date)
(Anmeldenummer)	(Anmeldetag)

Ich erkläre hiermit, dass alle in der vorliegenden Erklärung von mir gemachten Angaben nach bestem Wissen und Gewissen der Wahrheit entsprechen und ferner dass ich diese Angaben in Kenntnis dessen gemacht habe, dass vorsätzlich falsche Angaben oder dergleichen gemäß 18 U.S.C. 1001 mit Geldstrafe und/oder Gefängnis bestraft werden können, und dass derartige vorsätzlich falsche Angaben die Rechtswirksamkeit der vorliegenden Patentanmeldung oder eines aufgrund der Angaben erteilten Patentes gefährden können.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application(s) which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application(s) having a filing date before that of the application on which priority is claimed.

Priority Claimed?
Priorität beansprucht?
Yes/Ja No/Nein

27 June 2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(Filing Date)		
(Anmeldetag)		
(Filing Date)	<input type="checkbox"/>	<input type="checkbox"/>
(Anmeldetag)		

I hereby claim domestic priority under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

I hereby claim benefit under 35 U.S.C. 120 of any United States application(s) or 365(c) of any PCT international application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in a listed prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge my duty to disclose any information material to the patentability of this application as defined in 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

pending
(Status: patented, pending, abandoned)
(Status: patentiert, anhängig, aufgegeben)

(Status: patented, pending, abandoned)
(Status: patentiert, anhängig, aufgegeben)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

German Language Declaration

VERTRETUNGSVOLLMACHT: Ich erenne hiermit sämtliche unter der unten gezeigten Kundennummer des US-Patent- und Markenamts (United States Patent and Trademark Office, USPTO) aufgeführten Anwälte von SUGHRUE MION, PLLC, zu meinen Anwälten und ermächtige sie, diese Anmeldung vorzunehmen und alle hiermit verbundenen Geschäfte vor dem US-Patent- und Markenamt abzuwickeln. Ich bin mir bewusst, dass bestimmte unter der Kundennummer aufgeführte Anwälte von Zeit zu Zeit und im alleinigen Ermessen von Sughrue, Mion, PLLC, ausgetauscht werden können. Ich bitte ferner darum, dass sämtliche Korrespondenz im Zusammenhang mit der Anmeldung an die unter derselben Kundennummer des USPTO aufgeführte Anschrift gerichtet wird.

POWER OF ATTORNEY: I hereby appoint all attorneys of SUGHRUE MION, PLLC who are listed under the USPTO Customer Number shown below as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Sughrue Mion, PLLC, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 C.F.R. §1.69(b):

The declaration and power of attorney is an accurate translation of the corresponding English language declaration and power of attorney.

Signature

Christian Hemdel

Date

4/8/04

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

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Vorname(n) [falls zutreffend]

Christian

Family Name or Surname
Familien- oder Nachname

Hemdel

Inventor's signature
Unterschrift des Erfinders

Christian Hemdel

Date

Datum

February 17th 2006

Residence:

Wohnsitz:

Goeppingen-Faurnau

Citizenship

Staatsangehörigkeit

German

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Family Name or Surname
Familien- oder Nachname

Inventor's signature
Unterschrift des Erfinders

Date

Datum

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Wohnsitz:

Citizenship

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Mailing Address:

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